REMARKS

Claims 1-19 are all the claims pending in the application. Claim 18 is being canceled.

I.   Specification Amendments

The Applicant has reviewed the Specification and herein submits an amendment to the 4th

paragraph in the Summary of the Invention section on page 2 of the application to remove

erroneous references to the claims. No new matter is being added.

II.   Claim Rejections – 35 U.S.C. § 101

The Examiner rejected claim 18 under 35 U.S.C. § 101 as being directed to non-statutory

subject matter. The Applicant herein cancels claim 18.

III.   Claim Rejections – 35 U.S.C. § 103 – Phelps and Masanori References

The Examiner rejected claims 1-3, 6-15 and 17-19 under 35 U.S.C. § 103(a) as being

unpatentable over Phelps (US Patent Application No. 2005/0088963) in view of Masanori (JP

07177114). The Applicant respectfully traverses these rejections.

Claim 1

The Applicant submits that Phelps and Masanori cannot be combined to teach the

elements of claim 1, as Phelps and Masanori fail to teach wherein said protection function

"…further comprises the step of mapping the content of said K1 and K2 bytes by protocol exchange into POH bytes of the path overhead in SDH or SONET, at Low Order and/or High Order Level…." (Application, claim 1). The Examiner admits that "Phelps does not specifically disclose protection function based on transmission of protection information through K1 and K2 bytes of Section Overhead or Line Overhead." However, claim 1 further includes the step quoted above, wherein the content of the K1 and K2 bytes are mapped by protocol exchange into POH bytes of the path overhead in SDH or SONET, at Low Order and/or High Order Level. As stated in claim 1, this step is done "…so as to allow the handling of more than one protecting resource shared among different working resources, both in end-to-end handling and in intermediate handling." Neither Phelps nor Masanori disclose this step of mapping the content of the K1 and K2 bytes by protocol exchange. Further, neither Phelps nor Masanori disclose that the mapping is done into POH bytes of the path overhead in SDH or SONET, at Low Order and/or High Order Level.

The Examiner cites to paragraph [0002] of Masanori, which does not describe a method step of mapping content of the K1 and K2 bytes *by protocol exchange*, as set forth in claim 1. Masanori instead discloses that "…in the cases, such as a failure of a transmission line, in consideration of changing a transmission line, K1 so-called information and K2 information are specified on the NNI frame as change information, and these [K1] and K2 information are arranged as K1 and K2 byte in the section overhead (SOH)" (Masanori, para. [0002]). Masanori thus fails to describe the mapping of the K1 and K2 bytes *by protocol exchange* into POH bytes of the path overhead in SDH or SONET, at Low Order and/or High Order Level. It is this

mapping step that permits the handling of more than one protecting resource shared among different working resources, both in end-to-end and intermediate handling. Neither Phelps nor Masanori, taken alone or in combination, teach the elements of claim 1. Furthermore, Phelps and Masanori lack a suggestion or motivation to combine their systems to reach the method of the claimed invention. The Applicant therefore respectfully requests that the rejection be withdrawn.

Furthermore, as claims 2-14 depend, either directly or indirectly, on claim 1, the Applicant believes that these claims are allowable at least based on their dependency to claim 1.

Claim 2

The Applicant further submits that neither Phelps nor Masanori disclose the elements of claim 3, specifically the further mapping into K3 byte at high order level and into K4 byte and low order level for SDH technology. The Examiner cites to para. [0010] of Masanori as disclosing the elements of claim 2, but this section of Masanori only discloses the transmission of K1 and K2 byte information, and certainly not the further mapping into K3 byte at high order level and K4 byte and low order level for SDH technology. Furthermore, Phelps and Masanori lack a suggestion or motivation to combine their systems to reach the method of the claimed invention. Therefore, the Applicant submits that neither Phelps nor Masanori, taken alone or in combination, teach the elements of claim 2. The Applicant therefore respectfully requests that the rejection be withdrawn.

Claim 3

The Applicant also submits that neither Phelps nor Masanori disclose the elements of claim 3, of mapping into Z4 byte at high order level and into Z7 byte at low order level for SONET technology. The Examiner cites to para. [0020] of Masanori, which only discloses the sending of information using the Z3 and Z4 bytes, not the use of the Z4 and Z7 bytes recited in claim 3. Masanori further does not describe mapping by protocol exchange. Furthermore, Phelps and Masanori lack a suggestion or motivation to combine their systems to reach the method of the claimed invention. For at least these reasons, the Applicant submits that neither Phelps nor Masanori, taken alone or in combination, teach, suggest or provide motivation for the elements of claim 3.

Claim 6

The Applicant refers the Examiner to the arguments presented above regarding claim 1, and submits that claim 6 is allowable at least based on its dependency to claim 1.

Claim 7

The Applicant submits that neither Phelps nor Mansori disclose the elements of claim 7, specifically with regard to performing a check step by assigning a number to teach one of the protection resources and scanning, either in increasing or in decreasing order, the protection resources. The Examiner cites to page 1, para. [0010] of Phelps, which only discloses where network elements use network messaging to identify a priority of utilization of all of the links on a ring. Phelps doesn't disclose where this prioritization is done by assigning numbers or by scanning in increasing or decreasing order. For at least these reasons, the Applicant submits that

neither Phelps nor Masanori, taken alone or in combination, teach, suggest or provide motivation for the elements of claim 7.

Claim 8

The Applicant submits that Phelps does not teach the elements of claim 8, as Phelps does not disclose where a new switch criterion is performed *regardless of the priority level of Bridge Request already served*. The Examiner cites to para. [0073] of Phelps, which states, in relevant part, that the switch request 334a includes "…a request priority value…that is used at each of the tandem NEs to determine *whether* to preempt the current occupant, or to pend the request" (emphasis added). While Phelps discloses comparing the request priority value with the priority value of the occupant to determine if the switch request should preempt the current occupant or if the request should be pended, claim 8 specifies that the Bridge Request is issued and actions required by the new switch criterion are performed by using the available protection resource, *"regardless the priority level of Bridge Requests already served"* (emphasis added). Therefore, neither Phelps nor Masanori teach the claimed invention, as Phelps fails to teach performing a switch request regardless of the priority level of the request. Additionally, Phelps, taken alone or in combination with Masanori, does not suggest or provide any motivation for performing a switch request regardless of the priority level.

Claim 9

The Applicant refers the Examiner to the arguments presented above regarding claim 1, and submits that claim 9 is allowable at least based on its dependency to claim 1.

Claim 10

The Applicant submits that Phelps does not teach preempting *the lowest priority request* by the new Bridge Request, as Phelps does not disclose multiple priority levels of Bridge Requests. In para. [0073] of Phelps, cited by the Examiner, the request priority value is compared with only a single current occupant to determine whether to preempt the occupant or pend the request. In contrast, the invention embodied in claim 10 discloses that "if the priority of new switch criterion is higher than *at least one* of the Bridge Requests currently served, then, *the lowest priority request* is pre-empted by the request…" (emphasis added). While the embodiment of claim 10 discloses multiple Bridge Requests being compared with the new Bridge Request, Phelps is limited to a single comparison. Therefore, neither Phelps nor Masanori, taken alone or in combination, suggest or provide any motivation for preempting the lowest priority request.

Claim 11

The Applicant refers the Examiner to the arguments presented above regarding claim 1, and submits that claim 11 is allowable at least based on its dependency to claim 1.

Claim 12

The Applicant submits that Phelps fails to disclose a situation wherein more switch initiation criteria are simultaneously detected and the priority levels are the same. The Examiner cites to para. [0008] of Phelps, which only discloses comparison situations where one occupant or request is higher or lower than the other. Phelps does not disclose a situation as described in claim 12, "when more switch initiation criteria are simultaneously detected, the highest priority

level request will be served first; if the switch initiation criteria are *at the same priority level it is proposed that the one referring to the lowest Traffic Number will be served first.*" Not only do Phelps and Masanori fail to disclose a situation where the switch initiation criteria are at the same priority level, but Phelps and Masanori, taken alone or in combination, fail to disclose the solution of claim 12, where "the one referring to the lowest Traffic Number will be served first." Therefore, the Applicant submits that claim 12 is allowable over the cited art.

Claim 13

The Applicant refers the Examiner to the arguments presented above regarding claim 1, and submits that claim 13 is allowable at least based on its dependency to claim 1.

Claim 14

The Applicant submits that Phelps fails to disclose the elements of claim 14 where more protection resources are in a Wait Time to Restore condition and no other protection resources are available, such that a new Bridge Request will override the WTR state. The Examiner cites to para. [0058] of Phelps, which simply discloses the use of a preemption indicator. Phelps does not disclose any of the elements of claim 14, nor does the combination of Phelps or Masanori, taken alone or in combination, teach overriding a Wait Time to Restore state on a protection resource if no other resources are available.

Claim 15

The Applicant refers the Examiner to the arguments presented above with regard to claim 1, and submits that the same arguments apply to the network element described in claim 15. For at least the same reasons, the Applicant submits that claim 15 is allowable over the cited art.

Claim 17

 The Applicant submits that claim 17 is allowable over the cited art, as the Examiner has not provided support for the statement that the device for mapping or de-mapping a two-bits based multiframe as described in claim 17 is obvious at the time the invention was made. The Examiner admits that neither Phelps nor Masanori teach the elements of claim 17, but the Examiner does not rely upon any further teaching to demonstrate that the use of the device for mapping or de-mapping. The Applicant respectfully submits that the device described in claim 17 is allowable over the art, and requests that the Examiner provide support for the statement it is obvious to one of ordinary skill in the art.

Claims 18-19

The Applicant refers the Examiner to the arguments presented above with regard to claim 1, and submits that claims 18-19 are allowable for at least the same reasons.

IV.   Claim Rejections – 35 U.S.C. § 103 – Daniell Reference

The Examiner additionally rejected claims 4, 5 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Phelps (US Patent Application No. 2005/0088963) in view of Masanori (JP

07177114) as applied to claim 1, 2 and 15 above, and further in view of Daniell (US Patent

Application Publication No. 2003/0185149).

Claim 4

The Applicant refers the Examiner to the arguments presented above regarding claim 1,

and submits that claim 4 is allowable at least based on its dependency to claim 1.

Claim 5

The Applicant submits that Daniell fails to disclose mapping the content of said K1 and

K2 bytes into POH bytes using a two-bit based multiframe. The Examiner cites to para. [0024]

of Daniell, which only discloses "…wherein the address space of the SONET/SDH network is

defined by bits 5-8 of the K1 byte and bits 1-4 of the K2 byte…." Therefore, the Applicant

submits that Daniell, taken alone or in combination with Phelps and Masanori, fails to teach the

elements of claim 5.

Claim 16

The Applicant submits that Daniell fails to disclose the elements of claim 16, wherein a

device for mapping or de-mapping a four-bits based multiframe whose payload comprises *the*

first four bits of byte K1, the second four bits of byte K1 and the first four bits of byte K2. The

Examiner cites to para. [0024] of Daniell, which only discloses "…wherein the address space of

the SONET/SDH network is defined by *bits 5-8 of the K1 byte and bits 1-4 of the K2 byte…*"

(emphasis added) Therefore, the Applicant submits that Daniell, taken alone or in combination

with Phelps and Masanori, fails to teach the elements of claim 16.

V.   Conclusion

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

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Respectfully submitted,

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